

**DETAILED ACTION**

***Examiner's Amendment***

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Mr. Jonathan Parthum (Reg # 64082) on 8/13/10.

**Application has been amended as follow.**

**IN THE CLAIMS:**

Claim 9 (Currently Amended) A method, implemented by an unauthorized copying preventing apparatus, for preventing unauthorized copying of printed contents printed on printing paper, said method comprising:

a first step of acquiring pattern information according to a pattern carried by the printing paper, the first step including

shooting the pattern,

dividing, by the unauthorized copying preventing apparatus, a pattern image, obtained as a result of the shooting of the pattern, into a low luminance component and a high luminance component and separating the low luminance component and high luminance component from each other, and

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extracting, by the unauthorized copying preventing apparatus, the pattern information from the pattern image by extracting the pattern information from the low luminance component and the high luminance component separated from each other;

a second step of storing the acquired pattern information on the printing paper; and

a third step of verifying validity of the printing paper according to the stored pattern information.

Claim 14 (Currently Amended) A method, implemented by an unauthorized copying preventing apparatus, for preventing unauthorized copying of printed contents printed on printing paper, said method comprising:

a first step of picking up an image of a pattern carried by the printing paper;

a second step of dividing a pattern image obtained as a result of an image pickup operation into a low luminance component and a high luminance component and separating the low luminance component and high luminance component from each other;

a third step of dividing, by the unauthorized copying preventing apparatus, the pattern image to define a plurality of regions;

a fourth step of extracting, by the unauthorized copying preventing apparatus, the pattern information from the pattern image by extracting the

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pattern information from the low luminance component and the high luminance component separated from each other;

a fifth step of extracting each of the regions as pattern information and showing a predetermined profile as pattern information;

a sixth step of storing the extracted pattern information on the printing paper; and

a seventh step of verifying validity of the printing paper according to the stored pattern information.

Claim 21 (Currently Amended): A method, implemented by an unauthorized copying preventing apparatus, for preventing unauthorized copying of printed contents printed on printing paper, said method comprising:

a first step of picking up an image of a pattern carried by the printing paper by shooting the pattern;

a second step of dividing, by the unauthorized copying preventing apparatus, a pattern image, obtained as a result of the shooting of the pattern, into a low luminance component and a high luminance component and separating the low luminance component and high luminance component from each other, and

a third step of extracting, by the unauthorized copying preventing apparatus, characteristics of the pattern image by extracting the characteristics from the low luminance component and the high luminance component separated from each other;

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a fourth step of storing the extracted characteristics on the printing paper;  
and

a fifth step of reconfiguring the pattern image according to the stored characteristics and verifying validity of the printing paper according to a reconfigured pattern image.

***Response to Amendment***

2. Applicant's amendment filed on 6/9/10 has been entered.

Claims 34 is new claim.

Claims 3, 27- 33 are canceled.

Claims 16-26, are withdrawn currently amended to incorporate the allowable subject matter and are thus believed to be in condition for allowance.

Claims 1-2, 4-26 and 34 are pending in the application.

Applicant has amended claim 10, 15, 26 to overcome 35 USC § 101 rejection. Therefore, the rejection under 101 has been withdrawn.

***Response to Arguments***

3. Applicant's arguments filed on 6/9/10 have been fully considered and persuasive (see page 15 - 18, of the remarks filed on 6/9/10. The rejection under 102(e) is withdrawn and claims 1- 2, 4 - 26 and 34 are now allowed.

***Reasons for Allowance***

4. The following is an examiner's statement of reasons for allowance:

Claims 1-2, 4-26 and 34 are allowed and renumbered as 26.

The prior art of record Zeller et al., (US. 7,054,461) describes imaging processing methods for differentiating between originals and copies of printed materials.1. More specifically, Zeller describes creating an original print (106) from an original digital image (100) that includes embedded digital watermarks. 2. A forensic scanner (108) then scans original print (106) to

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produce a test image (110) that is used to detect fraudulent prints. 3.

Zeller, however, does not describe or suggest acquiring pattern information according to a pattern carried by printing paper and storing the acquired pattern information on the printing paper (as recited by the claim 1, 9, 10, 11, 14,15, 16, 21, 26 and 34), as commonly included in the independent claim 1, 9, 10, 11, 14,15, 16, 21, 26 and 34), the prior art of record fails to teach either singularly or in combination, fails to anticipate or render the above limitations obvious. Claims 1-2, 4-26 and 34 have been withdrawn from the rejection and are allowed.

5. Any comments considered necessary by applicant must be submitted on later than the payment of the issue fee and to avoid processing delays should preferably accompany the issue fee. Such submissions should be clearly labeled, comments on statement of reasons for allowance.

***Contact Information***

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sheela C Chawan whose telephone number is. 571-272-7446. The examiner can normally be reached on Monday - Friday 8.30 am - 5.00 pm and every Wednesday work from home. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vikkram Bali can be reached on 571-272-7415. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Sheela C Chawan/

8/13/10

Primary Examiner, Art Unit 2624

